

## PhD-M: Multivariate Business Statistics (PhD) 2023W

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### Course information

#### Course-Data

5.00 ECTS (2.00 SWS) | prüfungsimmanente Lehrveranstaltung | Course format: Presence  
SPL 4 - Wirtschaftswissenschaften | max. 15 participants | Teaching language: English

Course# 390 027 | Friday, 15:00 – 16:30; SE 5

**Instructor:** ao. Univ.-Prof. Dr. Heribert Reisinger  
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#### Target Group

Students of the PhD Management

#### Aims & Organisation

The aims of the course are (a) Understanding the principles of selected multivariate business statistics techniques, (b) Realising how to use these techniques in scientific work, and (c) Applying the techniques in a practical data analysis project.

The course consists of three parts. In the **first part**, the theoretical principles of selected multivariate techniques are presented by the instructor. Since not all the material can be covered, careful reading of the relevant chapters in the textbooks is necessary. In the **second part**, the participants are expected to present a scientific article in which one or more multivariate techniques are used (mid-term presentation). In the **third part**, the participants conduct a practical data analysis project. For data analysis, the SPSS package is used.

#### Registration and Attendance

Registration is online via u:space. Attendance in all units is a requirement for grading.

#### Assessment & Grading

Grading is based on the assessment of four items of work (50% are necessary for a positive grade):

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|-----------------------------------|------------|
| • Written examination             | 30 Percent |
| • Mid-term presentation (article) | 20 Percent |
| • End-term presentation (project) | 20 Percent |
| • Course paper                    | 30 Percent |

## Dates & Content

| LV | Termin | Inhalt   |
|----|--------|--|
| 1  | 6.10.  | Theory – Introduction                                    |
| 2  | 13.10. | Theory – Factor Analysis                                 |
| 3  | 20.10. | Theory – Cluster Analysis                                |
| 4  | 27.10. | Theory – Multiple Regression                             |
| 5  | 3.11.  | Reserve  |
| 6  | 10.11. | Theory – Logistic Regression                             |
| 7  | 17.11. | Mid-term presentation (article)                          |
| 8  | 24.11. | Mid-term presentation (article)                          |
| 9  | 15.12. | Written examination & Introduction data analysis project |
| 10 | 12.1.  | End-term presentation (project)                          |
| 11 | 19.1.  | End-term presentation (project)                          |
| 12 | 26.1.  | End-term presentation (project)                          |

## Literature

### Textbook

- (1) Hair, J.F.Jr., Black, W.C., Babin, B.J., Anderson, R.E. (2018): Multivariate Data Analysis, 8<sup>th</sup> ed., Cengage (7<sup>th</sup> ed.: Hardcover 2010, Kindle 2013, Paperback 2014)
- (2) Iacobucci, D., Churchill, G.A.Jr., (2022): Marketing Research – Method. Foundations, 13<sup>th</sup> ed., CreateSpace

### Supplement

- (3) Tabachnik, B.G., Fidell, L.S. (2019): Using Multivariate Statistics, 7<sup>th</sup> ed., Pearson
- (4) Backhaus, K., Erichson, B., Gensler, S., Weiber, R., Weiber, T. (2021): Multivariate Analysemethoden – Eine anwendungsorientierte Einführung, 16. Aufl., Springer